Application No. 10/723,071 Amendment dated March 12, 2006

Reply to Office Action of December 12, 2005

Docket No.: 04970/0200079-US0

AMENDMENTS TO THE DRAWINGS

The attached two sheets of drawings include a change to FIG. 2 and new FIG. 7. The sheet,

which includes FIG. 2, replaces the original sheet including FIG. 2, and the sheet, which includes

FIG. 7, adds FIG. 7 to the original drawings.

Attachment: Two Sheets of Drawings

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<u>REMARKS</u>

Reconsideration of the application is respectfully requested.

I. Status of the Claims

Claim 1 has been canceled without prejudice or disclaimer.

Claims 2-4 and 6 have been amended without the introduction of new matter.

Claims 7-9 have been added without the introduction of new matter.

Claim 2-9 are pending.

II Status of the Drawings

The drawings have been objected to under 37 CFR 1.83(a). Applicants have corrected FIG.

2 to delete the indication of the line III-III. Accordingly, the Brief Description of the Several Views

of the Drawings at page 7, lines 20 and 21 has been amended to described FIG. 3 as a cross-

sectional representation of the first housing and the second housing of the steering apparatus shown

in FIG. 2. Further, a new FIG. 7 is added to show a perspective view of the structure of a second

energy absorbing ring of the steering apparatus according to another embodiment of the present

invention described in the present specification at page 16, lines 13-24. No new matter is added.

Therefore, Applicants respectfully request that the objection to the drawings be withdrawn.

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III Status of the Specification

The disclosure has been objected to for informalities. Applicants have corrected the

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informalities noted by the Examiner. In addition, the Abstract has been replaced to correct

informalities noted by the Examiner and to place it in proper U.S. format. Further, the Brief

Description of the Several Views of the Drawings has been amended as noted above to properly

describe FIG. 3 and new FIG. 7, and the paragraph at page 16 has been amended to incorporate the

description relating to FIG. 7. No new matter is added.

IV Rejection under 35 U.S.C. § 112

Claims 1-6 have been rejected under 35 U.S.C. § 112, second paragraph, for being

indefinite. The Examiner points out numerous elements being unclear. Applicants have amended

the claims to be definite and no new matter has been added.

Specifically, with regard to Claim 3, the recitation in amended Claim 3 that "an external

diameter of the at least one portion of the ring portion where no plate piece is provided is equal to or

smaller than an external diameter of the second housing an end face of which contacts the ring

portion" is now definite. In this regard, see FIGS. 2 and 4 for example.

Further, with regard to Claim 4, the recitation in amended Claim 4 that "an internal radius of

a portion of a ring portion where no plate piece is provided is equal to or larger than an internal

radius of the first housing an end face of which contacts the ring portion" is definite. In this regard,

for example, in the non-limiting embodiment shown in new FIG. 7 attached to the present response

and described in the present specification at page 16, lines 13-24, the structure of the second impact

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energy absorbing ring 7 is different from those of other embodiments described in the present

specification.

In such embodiment shown in FIG. 7, because the second housing has the impact energy

absorbing protrusions 8 and 9, it is necessary for the second impact energy absorbing ring 7 to

include non-contact pathways. Thus, the ring 7 has the ring portion 77b and the plate pieces 77a,

and thereby the non-contact pathways are formed. Accordingly, an internal radius Γ_A of the portion

of the ring portion where no plate piece is provided is equal to or larger than an internal radius of

the first housing an end face of which contacts the ring portion. Therefore, amended Claim 4 is

definite.

Accordingly, Applicants respectfully request that the rejections of Claims 1-6 under 35

U.S.C. § 112, second paragraph, be withdrawn.

V Rejection under 35 U.S.C. § 103

Claim 1 has been rejected as unpatentable under 35 U.S.C. § 103(a) over JP 2000-219139

(herein "JP '139") in view of Kim et al. (U.S. Patent No. 6,109,652, herein "Kim"). Claims 2-6 has

been rejected as unpatentable under 35 U.S.C. § 103(a) over JP '139 in view of Kim, and further in

view of Cooper (U.S. Patent No. 3,877,319). Applicants respectfully traverse the rejections.

Claim 2 has been rewritten in independent form and amended to correct minor informalities.

Amended independent Claim 2 recites the features of the plurality of the first impact energy

absorbing protrusions, the plurality of second impact energy absorbing protrusions, and two impact

energy absorbing rings. Amended Claim 2 also recites that "one of the impact energy absorbing

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rings has a ring portion to contact with an end face of one of the first housing and the second

housing, and a plurality of plate pieces are disposed continuously with the ring portion separately

from each other in a circumferential direction at intervals corresponding to the impact energy

absorbing protrusions."

The outstanding Office Action recognizes that JP '139 and Kim, either taken individually or

in combination, do not disclose the rings having plate pieces spaced around protrusions. However,

the outstanding Office Action asserts that Cooper discloses "an impact energy ring having a ring

portion to contact with an end face of a housing and a plurality of plate pieces disclosed

continuously with the ring portion separate from each other at intervals corresponding to impact

energy absorbing protrusions (78)."

In contrast, the present invention as recited in amended Claim 2 is distinguishable over the

combined teachings of JP '139, Kim and Cooper because Cooper merely describes the steering

column assembly that includes the housing having only the first impact absorbing protrusions, and

one impact absorbing ring. Cooper does not describe the second impact absorbing protrusions and

the second impact absorbing ring, as recited in amended Claim 2. Thus, even if Cooper is combined

with JP '139 and Kim, the combined teachings of the references do not disclose all of the limitations

recited in amended Claim 2, specifically two different kinds of the impact absorbing rings included

in one housing assembly, one of which has a ring portion to contact with an end face of one of the

first housing and the second housing, and a plurality of plate pieces disposed continuously with the

ring portion separately from each other in a circumferential direction at intervals corresponding to

the impact energy absorbing protrusions.

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Accordingly, Applicants respectfully request the withdrawal of the rejection of Claim 2 and

Claims 3-6 dependent therefrom, based on the combined teachings of the references of JP '139, Kim

and Cooper.

Turning now to new independent Claim 7, it includes features similar to those recited in

amended independent Claim 2. Thus, the present invention recited in Claim 7 is distinguishable

over the combined teachings of the cited references at least for the above reasons advanced for

amended Claim 2.

Claim 7 is further distinguishable over the cited references because Claim 7 recites the

additional features that a plurality of plate pieces are disposed continuously with the ring portion

spaced from each other in a circumferential direction at intervals providing gaps between the plate

pieces and which correspond to the impact energy absorbing protrusions. As a result, the steering

apparatus as recited in Claim 7 is efficiently assembled.¹

In this regard, none of the cited references in the outstanding Office Action, either taken

individually or in combination, discloses the above features of the plate pieces which are disposed

continuously with the ring portion spaced from each other in a circumferential direction at intervals

providing gaps between the plate pieces and which correspond to the impact energy absorbing

protrusions, as recited in Claim 7. Specifically, with regard to Cooper, Cooper merely shows in Fig.

5 the integral annular flange 100, plate pieces of which are spaced from each other in a

circumferential direction at intervals without providing gaps between the plate pieces.

¹ See, for example, the present specification at page 13, lines 14-25, and Fig. 4.

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Therefore, Claim 7 and Claims 8 and 9 dependent therefrom are distinguishable over the

cited references, either taken individually or in combination.

CONCLUSION

In view of the above, each of the presently pending claims in this application is believed to

be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to

pass this application to issue.

The Examiner is respectfully requested to contact the undersigned at the telephone number

indicated below once he has reviewed the proposed amendment if the Examiner believes any issue

can be resolved through either a Supplemental Response or an Examiner's Amendment.

Dated: March 13, 2006

Respectfully submitted,

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